Docket No. 3818.00

IN THE APPLICATION

OF

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FOR A

RE-ROOFING METHOD AND APPARATUS

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RE-ROOFING METHOD AND APPARATUS

FIELD OF THE INVENTION

The present invention relates generally to static structures and, more particularly, to such structures with synthetic, resinous components.

BACKGROUND OF THE INVENTION

Although shingled roofs are known for their durability and long lives, they do deteriorate over time and require periodic replacement. Replacing a shingled roof is a major undertaking that typically requires a major investment in terms of manpower and time. Traditionally, an old, shingled roof was painstakingly torn off a building and hauled away before a new roof was added, exposing the occupants of the affected building to the weather. To reduce time and cost, roofers have more recently taken to leaving an old roof in place and installing a new roof atop the old roof. Because of the well-known benefits that they offer, it is not unusual for the new roof to be a metal one.

Metal roofing panels cannot be positioned directly atop shingles. Changes in temperature can move metal roofing panels over the typically abrasive tops of asphalt shingles thereby scratching the undersides of the roofing panels. Moisture entering the scratched areas can cause premature corrosion of the metal roofing panels. Spacers, then, must be used to separate metal roofing panels from shingled surfaces.

The wooden strips are hammered into place atop an existing shingled roof at intervals sufficient to adequately support metal roofing panels. Afterward, the metal roofing panels are positioned atop the spacers and attached to the building in the usual manner. Unfortunately, installing the wooden spacers is slow business and, over time, they tend to warp and rot thereby limiting the lifespan of the new metal roof. Furthermore, metal roofing panels supported by

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wooden spacers tend to become deformed in a permanent and unsightly way when unskilled roofers walk upon them during installation.

SUMMARY OF THE INVENTION

In light of the problems associated with the known manner of installing a new, metal roof atop an old, shingled one, it is a principal object of the invention to provide a new re-roofing method and apparatus that permits a metal roof to be installed atop an old, shingled roof in an easy, fast, and inexpensive manner. No special tools or skills are required. Thus, unskilled laborers can be employed in performing the method after a brief training period.

It is another object of the invention to provide a spacer for positioning between an old, shingled roof and a new metal one that is lightweight and resilient. It will not serve to dent or deform a metal roofing panel when walked upon in the manner of wooden spacers. The spacer will accommodate metal roofing panels of varied profiles or contours.

It is a further object of the invention to provide a spacer of the type described that is impervious to weathering. It will neither warp nor rot in the presence of moisture and widely fluctuating temperatures. A roof formed with the spacer is equally durable and weatherproof.

Still another object of the invention is to provide a spacer that can be distributed in the form of a roll for easy storage and transport. The spacer can be unrolled at the time of installation directly upon an existing, shingled roof. If desired, the spacer can be stacked in double or triple layers to fill sags or sways in a shingled roof--an almost impossible task with wooden spacers. Without the spacer of the present invention, a sagging, shingled roof would have to be removed and a new plywood deck laid down before a metal roof could be installed.

It is an object of the invention to provide improved elements and arrangements thereof in a spacer for the purposes described which is lightweight in construction, inexpensive to manufacture, and dependable in use.

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Briefly, the method and apparatus in accordance with this invention achieves the intended objects by featuring a spacer comprising a strip of resilient, polyethylene foam. In use, a pair of spacers are positioned along two rows of shingles on a roof. Then, a corrugated metal panel is positioned atop the pair of spacers and is attached to the roof by a screw driven through the corrugated metal panel.

The foregoing and other objects, features and advantages of the present invention will become readily apparent upon further review of the following detailed description of the preferred embodiment as illustrated in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention may be more readily described with reference to the accompanying drawings, in which:

FIG. 1 is a perspective view of a corrugated metal roofing panel being installed atop a shingled roof in accordance with the present invention.

FIG. 2 is a cross-sectional view of a corrugated metal roofing panel installed atop a shingled roof.

Similar reference characters denote corresponding features consistently throughout the accompanying drawings.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the FIGS., a pair of spacers in accordance with the present invention is shown at 10a and 10b. Spacers 10a and 10b comprise a strips of polyethylene foam having a width of about 3 inches (7.6 cm) and a height of about ¼inch (0.6 cm). Spacers 10a and 10b can have any length but would normally be cut from a piece measuring about 300 feet (100 m) long so as to extend fully from one side of a roof 12 to the other. Prior to attaching spacers 10a and

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10b to roof 12, spacers 10a and 10b would be configured as rolls as shown at 14 for easy storage and transport.

Use of spacers 10a and 10b is straightforward. First, spacer 10a is oriented by a roofer 16 in a generally horizontal manner and positioned atop the exposed portion of a row of asphalt shingles 18 covering roof 12. (With asphalt shingle roofing, the exposed portion would have a width of about 5 inches (13 cm) and would easily accommodate spacer 10a without such overlapping adjacent rows of shingles. Asphalt shingles 18, also, have a thickness of about 1/8 inch (0.3 cm) permitting spacer 10a to extend well above the exposed portions of adjacent shingles 18.) Then, tacks 20 are driven through spacer 10a at selected intervals, say, every few feet to prevent spacer 10a from sliding around. Next, spacer 10b is positioned atop the exposed portion of another row of asphalt shingles 22 parallel to spacer 10a and is tacked down. Finally, a corrugated metal roof panel 24 is slid atop spacers 10a and 10b and is fastened to roof 12 by means of screws 26.

If roof 12 is found to have any sagging areas, spacers 10a and 10b can be stacked in those places so that metal roof panel 24 is evenly supported. Spacers 10a and 10b, being relatively soft, permit tacks 20 and screws 26 to be driven through such regardless of the number spacers that are stacked upon one another.

The finished roof includes a wooden joist 28 supporting a wooden deck 30. Positioned upon deck 30 is an underlayment 32 comprising asphalt-saturated felt. Upon underlayment 32 is positioned several rows of a small shingles 18 made of asphalt-impregnated felt coated with a layer of colored stone or ceramic granules. Atop shingles 18 are positioned spacers 10a and 10b and metal roof panel 24. Such a construction provides a surface that is: virtually leak-proof, an excellent thermal insulator and somewhat yielding so that loads applied to metal roof panel 24 do not cause it to be permanently deformed.

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While the invention has been described with a high degree of particularity, it will be appreciated by those skilled in the art that modifications may be made thereto. For example, spacers 10a and 10b can be dimensioned for use with wooden shingles or slate tiles that are typically thicker than asphalt shingles. Therefore, it is to be understood that the present invention is not limited to the sole embodiment described above, but encompasses any and all embodiments within the scope of the following claims.

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